

PROJECTORS

INTRODUCTION

Whether you want to show off your company's products with a PowerPoint presentation or show the latest blockbuster movie to your friends, a projector will help you make a big impression. The latest office projectors are tiny and portable but incredibly bright, and the latest home cinema projectors are ready to show high-definition video.

They're also more affordable than ever. You can now buy a home cinema projector for less than £700, and the cheapest office projectors cost around £600. If you've been put off by high running costs, you can rest easy: many now use bulbs that cost as little as 5p per hour.

This month we've tested 12 of the latest projectors. Eight are ideal for business use, and four are designed for home cinema. No matter who's in your audience, we'll help you pick a projector that can't fail to impress.

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IMAGE CONSCIOUS

These days there's a projector for you, whatever your needs. We test a selection of office and home cinema models to shed light on the issue of which to pick

Choosing a... Projector

Cramming your friends or colleagues around a monitor or TV screen is no way to impress. A projector allows you to ensure that everyone has a great view. With two distinct types of projector, though, and a dazzling array of specifications available, it can be hard to know which one to choose. We'll guide you through the different technologies available to ensure that you pick the right projector for your needs.

WHAT'S SHOWING?

There are two distinct types of projector: those designed for office use and those designed for showing movies at home. The two types are very different, so we've divided this test into two distinct groups.

If you want to use your projector only in the office, the choice is simple: buy an office projector. Similarly, if you only ever want to show films at home, look at the home cinema models. If you want a single projector to do both, though, it's a little more complicated.

If you want to show both presentations and movies, we recommend looking for a projector in the office group. Home cinema projectors are designed to operate in near darkness, so if you use one in a brightly lit meeting room it won't produce a clear image. We tested all the office projectors here with movies to see

how well they performed, so our reviews will point you towards a projector that will work in both situations.

DLP v LCD

Home and office projectors work using one of two technologies: LCD and DLP. The two are very different, and each has specific strengths and weaknesses.

At the heart of a DLP projector is a small chip, measuring less than an inch across, whose surface is covered in tiny mirrors. Each mirror represents one pixel of the image that is projected. Light shines on the chip, whose mirrors reflect it out through the projector's lens.

In order to create light or dark areas, the tiny mirrors on the chip are rapidly tilted from side to side. With the mirrors tilted one way they reflect light out of the projector, creating a light pixel. When facing the other way the light is diverted away inside the projector, leaving the pixel dark. By flicking the mirror back and forth many times per second, various shades of grey can be created. In order to add colour to the image, DLP projectors use a wheel containing red, green and blue filters. This spins around, passing the filters through the light in turn. This occurs very quickly, so although the screen is showing red, green and blue pictures in turn, the human eye sees only one colour image.



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The main drawback of DLP technology is the rainbow effect. This occurs when your eye notices the three coloured images separately, so you see a slight rainbow-coloured fringe on some parts of the image. This is most noticeable on moving white objects such as the credits after a film. Not all projectors produce the same amount of rainbow effect, so our reviews will tell you which suffer from it badly and which hardly produce any at all. The main advantage of the DLP system is size. DLP technology takes up little space, so DLP projectors can be built into very portable cases.

LCD projectors can't be built into very small cases, but they are rather simpler to understand. White light from a bulb is split into its red, green and blue components. Each beam of coloured light passes through a separate LCD panel, which selectively blocks any areas that should be dark and allows light through in areas that should be bright. This creates three monochrome images, which are recombined into one just before the light exits the projector.

LCD projectors do not suffer from the rainbow effect, but most have a lower contrast ratio than DLP models. This isn't a big problem for business presentations, but when watching films it leaves black areas of the screen looking merely dark grey. In order to prevent this, some LCD projectors use a dynamic iris control to limit the amount of light that passes through the

projector in dark scenes. This technology is usually employed in home cinema projectors, and is known as 3-LCD.

BRIGHT IDEA

All projectors have a brightness rating, stated in ANSI lumens. When choosing a home cinema projector, brightness isn't particularly important. You'll want to watch movies in a darkened room, so most home cinema models have a brightness rating of less than 1,200 ANSI lumens.

If you're buying a projector for use in the office, though, brightness is a key concern. Most office projectors have a brightness rating of at least 2,000 ANSI lumens, so they'll show up in a meeting room. If you know that you'll want to give presentations in very bright

rooms, look for one with a rating of 2,500 or even 3,000 ANSI lumens.

A CONNECTION IS MADE

When buying an office projector you're likely to want to connect it to a notebook. All the office projectors here have a D-sub VGA input, but few have DVI sockets. If your computer has no VGA output, you'll need to choose carefully.

Every home cinema projector here has an HDMI input, so you can connect an HD source such as a Sky HD box or a Blu-Ray player. They also have component video inputs so you can display standard DVD films using a progressive scan DVD player. If you want to connect any other devices, the table on page 90 shows which other inputs are included with each projector.

How we test Projectors

To assess image quality we use our standard suite of monitor tests, with greyscale and colour wheel transition tests to show up any problems with colour accuracy, contrast and brightness. We also show a selection of font sizes to see which display legibly, and perform video signal processing tests using the HQV video benchmark suite. This reveals any problems with anti-aliasing or image noise.

We also test each projector using movie clips. Projectors with a component video input are connected to our high-quality Pioneer DVD player to assess how well they can display progressive-scan DVD footage. Where possible we also test using a series of 720p HD video clips. This allows us to determine how well each projector can cope with the fine detail present in high-definition footage.

ACER
PD527W

★★★★★

£871 inc VAT



Acer has clearly designed the PD527W with business users in mind. As well as Ethernet and wireless networking, the PD527W has an exceptionally bright ANSI lumens rating of 3,000. It will produce a clearly visible picture in even the brightest room. It's particularly suitable for use in a small room, as it has a quiet 30dB noise level and can produce a usable 63cm image at a distance of 1.5m.

The PD527W produces a better image than Panasonic's PT-LB50NTEA when connected wirelessly. Colours are smooth and deep, while text is crisp and clear. Unfortunately, the PD527W suffers from one major drawback: the rainbow effect is more pronounced on this projector than any other model in the group that uses DLP technology. Even when displaying still images, simply moving your head reveals a sparkling prism.

This is a shame because in most other respects the image quality is well above average. The brightness and contrast are superb. Colours are rich, if a little over-bright at the top end of the spectrum. We tried to tone them down a little using the settings, but failed. The sharp images and excellent contrast make this projector particularly good at producing moving images. Our movie clips looked great, and interlaced footage was handled with ease. Of the office projectors only Toshiba's TLP-X2000 produced better results in our video signal-processing test.

With wireless networking and great image quality, the Acer PD527W could almost be a winner. It suffers from a very pronounced rainbow effect, though, making Dell's 1800MP a better buy.

SUMMARY

- ✓ Ethernet and WiFi
- ✓ Displays video well
- ✗ Pronounced rainbow effect

OFFICE PROJECTOR DLP 1,024x768 native resolution, 2,000:1 contrast ratio, 3,000 ANSI lumens
PART CODE EY.J2701.013
SUPPLIER www.morecomputers.co.uk
DETAILS www.acer.co.uk

BENQ
MP721

★★★★★

£692 inc VAT



BenQ's MP721 immediately stands out from the rest of group because it's dark purple rather than silver or black. It also plays a jaunty tune when switched on. It costs just over £10 less than Dell's 1800MP, and there are many similarities between the two.

The MP721's lamp running costs are a little less at just 5p per hour. It is also one of only two office projectors with a DVI connector as well as VGA, the other being Acer's PD527W. It is a little brighter than Dell's projector, with an ANSI lumens rating of 2,500. The MP721 has the same contrast ratio of 2,000:1 as the 1800MP and, like Dell's projector, the contrast it produces is excellent. Whites are pure, and blacks are truly dark. It produced smooth transitions in our greyscale gradient test. Details in the darkest areas of film clips are clearly picked out, as is text.

With a little adjustment we were able to produce fairly accurate colours, but skin tones remained a little ruddy and reds appeared slightly brown. The picture suffered from a noticeable rainbow effect, but not as bad as that found on Acer's PD527W. Its performance in our video signal-processing test was almost identical to that of Dell's projector. It did well in the sections designed to test sharpness and anti-aliasing.

If you only ever display static PowerPoint slides, the MP721 is as good as Dell's 1800MP and a little less expensive. That said, it's not as good with moving images, has slightly less accurate colours and more rainbow effect. It's a decent business projector, but Dell's 1800MP is better.

SUMMARY

- ✓ Good contrast
- ✓ Good image quality
- ✗ Noticeable rainbow effect

OFFICE PROJECTOR DLP 1,024x768 native resolution, 2,000:1 contrast ratio, 2,500 ANSI lumens
PART CODE 9J.J2J77.B5E
SUPPLIER www.dabs4work.com
DETAILS www.benq.co.uk

DELL
1800MP

★★★★★

£704 inc VAT



Dell's 1800MP has a small footprint, but it's quite tall and boxy. It isn't the cheapest projector here, but it's still very affordable. Its lamp costs 8p per hour to run, which is reasonable. Some projectors in the group cost just 5p per hour, but others cost 10p or more.

With a rating of 2,100 ANSI lumens this isn't the brightest projector in the group, but it's bright enough to run presentations with the lights on. It throws an impressive 199mm picture from just 2m, which will be useful in a small room. It has two D-sub VGA connectors, allowing you to connect it to two computers at once and quickly swap between two presenters.

The 1800MP produces an image with well-judged contrast, and colours that are rich but not oversaturated. Skin tones are realistic, and colours are the best from any DLP projector in this test. It performed well when showing moving pictures, too. Colours were vibrant, and our video signal-processing tests showed that the 1800MP was better than any other office projector at anti-aliasing a moving image to remove jagged edges. When it comes to text-based presentations you'll be able to cram a lot into each slide, as even 6.8pt Arial text appeared sharp on the big screen.

The 1800MP is a good all-round projector. It has excellent image quality, suffers from less rainbow effect than the other DLP office projectors and is reasonably priced. If you want a business projector, this is the best choice, and it's suitable for watching movies from time to time.

SUMMARY

- ✓ Good contrast
- ✓ Superb image quality
- ✓ Minimal rainbow effect

OFFICE PROJECTOR DLP 1,024x768 native resolution, 2,000:1 contrast ratio, 2,100 ANSI lumens
PART CODE 1800MP
SUPPLIER Dell 08701 524699
DETAILS www.dell.co.uk

HITACHI
CPX5

★★★★

£821 inc VAT



Hitachi's CPX5 has a square, silver shoebox-like design that looks fairly boring. It is one of the smallest in the group and, at only 1.7kg, it's the second lightest. At 15p per hour, though, it's the most expensive office projector here to run.

The CPX5 is rated at 2,500 ANSI lumens, so it can produce a clear image in a brightly lit room. As it uses LCD technology its contrast rating of 500:1 is one of the lowest in the group. However, it performed well in our tests. It produced a smooth greyscale, although it had difficulty differentiating between similar shades at the very darkest and brightest ends of the scale. This meant that high-contrast images weren't as sharply detailed as those produced by Dell's 1800MP. Our colour wheel test was reproduced well, and we could generate a clear, clean white screen.

Our video clips looked good. The CPX5 put in a variable performance in our video signal-processing tests. It scored full marks in the sharpness tests, but failed dismally in the noise-reduction benchmarks. We could see considerable noise speckling coloured areas such as sky. Text written in fonts as small as 7.5pt Arial appeared crisp and sharp when blown up on the big screen. The CPX5 has a USB socket and can display JPEG files stored on a flash drive, but it can't show PowerPoint files without a computer.

The CPX5 is a decent projector. It produces crisper images than the similarly priced Panasonic PT-LB50NTEA. However, Dell's 1800MP is just as sharp, has better image quality, lower running costs and is much cheaper.

SUMMARY

- ✓ Rich colours; bright image
- ✗ Expensive to run
- ✗ Too much image noise

OFFICE PROJECTOR LCD 1,024x768 native resolution, 500:1 contrast ratio, 2,500 ANSI lumens
PART CODE CPX5
SUPPLIER www.pcwb.com
DETAILS www.hitachidigitalmedia.com

NEC NP60

★★

£1,033 inc VAT



NEC's NP60 is ideal if you don't know what sort of surface you'll be projecting images on to. The wall colour feature allows you to project directly on to a painted wall, adjusting to compensate for nine shades of paint. When you use the zoom ring to enlarge or reduce the projected image manually, the NP60 will automatically adjust its focus. It's the only projector in the group that does this.

This is the most expensive office projector in the group and is more expensive than three of the home cinema projectors. Despite this, it doesn't have any connectors other than the usual VGA, composite and S-video inputs. Its lamp is also expensive, costing 11p per hour to run.

We wondered if the extra cost could have been justified by good image quality, but unfortunately this doesn't seem to be the case. No matter how much we adjusted its settings, colours remained muted. All the DLP projectors here had difficulty accurately reproducing red areas, and many gave a yellowish cast to images. On most other projectors these problems could be overcome by fiddling with the controls, but on the NP60 they stubbornly remained.

It also produces a significant rainbow effect. Although not as pronounced as that of Acer's PD527W, this is still distracting when watching moving images. The focus is good, though, and images are sharp. Text is crisp, even when it's as small as Arial 6.8pt on the source material. This is a reasonable projector for business use, but at this price it's poor value.

SUMMARY

- ✓ Useful automatic focus
- ✗ Muted colours, inaccurate reds
- ✗ Expensive to buy and run

OFFICE PROJECTOR DLP 1,024x768 native resolution, 1,600:1 contrast ratio, 3,000 ANSI lumens
PART CODE 50032049
SUPPLIER www.zomp.net
DETAILS www.nec.co.uk

PANASONIC PT-LB50NTEA

★★

£805 inc VAT



This is one of just two office projectors in the group that can connect wirelessly to a network or computer.

Connecting wirelessly reduces the colour depth, though, so it isn't able to display the same full range of colours as you get using a standard cable. This is disappointing, as the Acer PD527W had no such limitation. More annoyingly, text looked slightly smudged when using the wireless connection. More information in the manual on setting up a wireless connection would be helpful, too, as we found that setting up the software required more than a little guesswork.

Although the projector did better at producing crisp text over a wired connection, it was still one of the poorer performers in this area. Any text written smaller than 10pt Arial looked smudged, which is annoying given that other projectors could clearly reproduce text sizes of below 7pt. The projector has a built-in speaker, but at 1W it is quiet and the sound is tinny. Along with Toshiba's TLP-X2000 it has the lowest contrast ratio in the group at 400:1. This limited contrast is visible, as the PT-LB50NTEA struggled to display a suitably dark black screen in our test. Toshiba's TLP-X2000, which has the same contrast ratio, performed better.

The PT-LB50NTEA also performed poorly in our video signal-processing tests. Images lacked sharpness, and we could see noise in solid blocks of colour. It wasn't good at anti-aliasing video, either, giving straight edges a jagged look. The PT-LB50NTEA has a lot of connection options, but with poor image quality and an unremarkable price it's poor value.

SUMMARY

- ✓ Wireless connection
- ✗ Limited contrast
- ✗ Poor image quality

OFFICE PROJECTOR LCD 1,024x768 native resolution, 400:1 contrast ratio, 2,000 ANSI lumens
PART CODE PT-LB50NTEA
SUPPLIER <http://uk.insight.com>
DETAILS www.panasonic.co.uk

TOSHIBA TLP-X2000

★★★★★

£604 inc VAT



Toshiba's TLP-X2000 is the least expensive projector in the group. Despite this, Toshiba doesn't seem to have skimped on the features. It even has a VGA out port, which the NP60 lacks. Toshiba has also included a built-in speaker, but it's so quiet that any noise it produces can be easily drowned out by background noise. The 1W speaker built into Hitachi's CPX5 is more useful, even if it doesn't sound particularly good. The lamp costs just 6p per hour to run, making this one of the cheapest projectors to use as well as to buy.

As with the other DLP projectors here, we had to adjust the colour settings to get rid of a yellowish colour cast and produce realistic red shades. Even after adjustment red areas appeared slightly brown. At 400:1 this projector has one of the lowest contrast ratios in the group, along with Panasonic's PT-LB50NTEA. It produces better results than the PT-LB50NTEA, though, and like Hitachi's CPX5 it displays high-contrast images surprisingly well. When displaying moving images, the TLP-X2000 surprised us. It was the best of the office projectors at removing jagged interlacing artefacts from video, and it did well at removing noise.

Images produced by the TLP-X2000 weren't perfect, though. The Windows desktop didn't look as crisp as when displayed using the other projectors, and text sizes of below 12pt looked smudged. If you're on a tight budget, the TLP-X2000 will do the job, but if you can stretch your budget by £100 Dell's 1800MP is significantly better.

SUMMARY

- ✓ Very cheap
- ✓ Good at de-interlacing video
- ✗ Images lack sharpness

OFFICE PROJECTOR LCD 1,024x768 native resolution, 400:1 contrast ratio, 2,000 ANSI lumens
PART CODE TLP-X2000
SUPPLIER www.oxy.co.uk
DETAILS www.toshiba.co.uk

VIEWSONIC ViewDock PJ258D

★★★★

£799 inc VAT



ViewSonic's ViewDock PJ258D is a sleek, shiny black projector. In fact, it looks more like a product designed for use in the home than an office. However, it has the small size, resolution and native aspect ratio that you'd expect to find on a business projector. Its connectivity options aren't suitable for home cinema use, with no component video or HDMI inputs, but bizarrely ViewSonic has included an iPod dock on the top of the case. This allows you to display video from an iPod without connecting via a PC. It recharges the player, too. The quality of the video shown is surprisingly good considering its source, but the PJ258D's sound isn't really up to the job. Its 2W speakers are a bit louder than we expected, but they're tinny.

This would be a good projector to take to meetings. Its focus is crisp and sharp and text as small as 6.8pt Arial appears sharp onscreen. It had problems reproducing red areas accurately, and we couldn't persuade it to produce natural skin tones. It performed poorly in our video signal-processing test, with images showing lots of noise in areas of solid colour. It handled anti-aliasing poorly, leaving jagged toothmarks on diagonal lines. At 13p per hour the lamp is one of the most expensive to run in this group.

A projector with an iPod dock sounds clever, but it will be of little use in meetings and this projector isn't really suitable for home use. It fared reasonably well in our tests, but Dell's 1800MP is better and cheaper.

SUMMARY

- ✓ iPod dock works well
- ✗ Expensive to run
- ✗ Poor anti-aliasing

OFFICE PROJECTOR DLP 1,024x768 native resolution, 2,000:1 contrast ratio, 2,000 ANSI lumens
PART CODE PJ258D
SUPPLIER ViewSonic 01293 643900
DETAILS www.viewsonic.co.uk

HITACHI Illumina PJ-TX300

★★★★★

£814 inc VAT



The glossy black sheen on Hitachi's Illumina PJ-TX300 looks fabulous, but this projector is more than just a pretty face. It's the only home cinema projector to use 3-LCD technology, with a dynamic iris to give better contrast than traditional LCD projectors. Its contrast rating of 10,000:1 is the highest in this test, and the dynamic iris helps it to produce impressively dark black areas.

The PJ-TX300 produces stunning moving and still images. It has a VGA input for connecting to a PC, and an HDMI socket that can be used for a computer or HD device. Action-packed 3D games looked particularly atmospheric. Focus is crisp, details are sharp and colours are vivid and realistic. It performed well in our greyscale test, producing a smooth transition from black to white. Our colour wheel tests looked good, too.

With a native resolution of 1,280x720, the PJ-TX300 supports 720p high-definition video. It produced stunning results when displaying our HD video clips. It excelled at handling interlaced material, too, performing well ahead of the pack in our video-processing tests. It has a brightness rating of 1,200 ANSI lumens. This is the highest of the home cinema models, but you'll still need a darkened room to get a good picture.

Whether you've got a small or large room, the PJ-TX300 will fit right in. It will show a 203cm image at 2m. If you want a projector to show films this is an ideal choice, and at just over £800 it's quite a bargain, too.

SUMMARY

- ✓ Inexpensive
- ✓ Superb image quality
- ✓ Excellent contrast

HOME CINEMA PROJECTOR 3-LCD
1,280x720 native resolution, 10,000:1
contrast ratio, 1,200 ANSI lumens
PART CODE HITPRX63
SUPPLIER www.pixmania.co.uk
DETAILS www.hitachidigitalmedia.com

INFOCUS Play Big IN76

★★★★

£1,214 inc VAT



This shiny black projector from Infocus will certainly make a statement in any living room. It's the biggest model in the test, one of the heaviest, and has a swivel base. It uses a six-segment colour wheel, which significantly reduces the rainbow effect that you get from earlier generations of DLP projectors. This works well, and we could hardly see any rainbow-coloured fringing.

The IN76 produces a rather small 152mm picture at a distance of 2m. It has no VGA or DVI connectors, but there is one M1-DA/DVI connector. This combines a DVI input and a USB connector in one plug, so it allows you to connect to a PC's DVI output if you buy the necessary converter. There's also an HDMI socket, so you can connect an HD video source or a computer using an adaptor cable. There's also a component video input for standard progressive-scan DVD players. Oddly, you have to use the menu system to enable most of the inputs before you can start to use them.

As with many DLP projectors in this test, the IN76 produced red areas that looked slightly brown. We couldn't correct this completely. Other colours looked good but weren't as vibrant as those produced by the Hitachi PJ-TX300. It performed well when showing HD video clips, picking out sharp detail in even the darkest scenes, but was less impressive in our image noise-reduction tests. Even with the noise reduction setting on, it produced too much noise.

The IN76 is a good home cinema projector that can display HD video very well. Unfortunately, it's very expensive. Hitachi's PJ-TX300 is far cheaper and produces a better picture.

SUMMARY

- ✓ Reduced rainbow effect
- ✗ Red areas appear slightly brown
- ✗ Suffers from image noise

HOME CINEMA PROJECTOR DLP
1,280x720 native resolution, 3,000:1
contrast ratio, 1,000 ANSI lumens
PART CODE IN76
SUPPLIER www.pixmania.co.uk
DETAILS www.infocus.com

OPTOMA ThemeScene HD70

★★★★

£680 inc VAT



Optoma's ThemeScene HD70 stands out, if only because it's white. This might suit some rooms, but it's unlikely to match many other pieces of home cinema equipment. When we first turned on the HD70, the sky on the Windows desktop background looked green instead of blue. We also had to adjust the brightness and contrast. No other projector here required so much adjustment straight from the box in order to get a decent picture.

Even after adjustment, colours were rich but a little oversaturated. This had an odd effect on light colours such as yellow, which were so bright that they appeared to glow in still images. Like the other DLP projectors, reds had a slightly brownish appearance. Skin tones were a little yellow. The HD70 did well at picking out detail in dark areas, though, and our HD clips were sharp and vividly reproduced. It displayed a perfect Windows desktop when connected to our computer via its HDMI input, but when using VGA we couldn't get an acceptable 1,280x720 image.

The HD70 uses a 7-segment colour wheel and suffers from very little rainbow effect. It also has the highest contrast ratio of the DLP models.

For only £680 the Optoma will let you display 720p video. Unfortunately its colour accuracy leaves much to be desired, and it's not good when connected to a computer via VGA. Unless your budget is extremely tight, we recommend the slightly more expensive Hitachi.

SUMMARY

- ✓ Inexpensive
- ✗ Problems with red and yellow
- ✗ Difficulties with VGA input

HOME CINEMA PROJECTOR DLP
1,280x720 native resolution, 4,000:1
contrast ratio, 1,000 ANSI lumens
PART CODE OPTPR022
SUPPLIER www.cvsmedia.co.uk
DETAILS www.optoma.co.uk

TOSHIBA TDP-ET20

★★★

£949 inc VAT



The most stylish projector here, Toshiba's TDP-ET20 is smooth, egg shaped and finished in metallic black. Unfortunately, its looks are ruined when you start plugging in cables. All the connectors are located under a removable plastic panel at the front. Once you take this off and start connecting devices, it begins to look messy.

The rear of this projector is occupied by a built-in DVD player. It also has a subwoofer built in, which explains why it weighs a whopping 5kg. Its 18.5W speakers produced the best sound in the group by some margin, but even in a quiet room we still needed to turn up the volume all the way to hear soundtracks. The big selling point of this projector is its short throw distance. It has been designed to sit in a corner looking decorative until it's needed, then you can pop it on a table and it will throw a big 305cm picture from 159cm. It needs to be situated on a low surface, though.

The TDP-ET20 has a native resolution of 854x480, which is ideal for standard-definition DVDs. It can scale down 720p and 1,080i HD video, but anyone wanting to display HD footage regularly will want to buy a projector that supports its full resolution. Its image quality is underwhelming. Colours were not as vivid as those from Hitachi's PJ-TX300, and skin tones are not as realistic.

If your priority is saving space, the TDP-ET20 could be just the ticket. You can buy an HD-ready projector with better image quality for less, though.

SUMMARY

- ✓ Clever design
- ✗ Lower-than-HD resolution
- ✗ Poor image quality

HOME CINEMA PROJECTOR DLP
854x480 native resolution, 2,000:1
contrast ratio, 1,100 ANSI lumens
PART CODE TDPET20UK
SUPPLIER www.comet.co.uk
DETAILS www.home-entertainment.toshiba.co.uk



PROJECTORS

OFFICE PROJECTORS

★ BEST BUY								
MANUFACTURER	ACER	BENQ	DELL	HITACHI	NEC	PANASONIC	TOSHIBA	VIEWSONIC
Model	PD527W	MP721	1800MP	CPX5	NP60	PT-LB50NTEA	TLP-X2000	ViewDock PJ258D
Rating	★★★★	★★★★	★★★★★	★★★	★★	★★	★★★★	★★★
SPECIFICATIONS								
Technology	.7in DLP	.55in DLP	0.55in DLP	0.63in LCD	0.55in DLP	0.7in LCD	0.61in LCD	0.55in DLP
Lamp	230W	200W	200W	190W	220W	165W	210W	200W
Lamp life in hours (economy)	4,000 hours	4,000 hours	3,000 hours	2,000 hours	2,000 hours	3,000 hours	3,000 hours	3,000 hours
Brightness (ANSI lumens)	3,000 ANSI lumens	2,500 ANSI lumens	2,100 ANSI lumens	2,500 ANSI lumens	3,000 ANSI lumens	2,000 ANSI lumens	2,000 ANSI lumens	2,000 ANSI lumens
Contrast ratio	2,000:1	2,000:1	2,000:1	500:1	1,600:1	400:1	400:1	2,000:1
PICTURE								
Native resolution	1,024x768	1,024x768	1,024x768	1,024x768	1,024x768	1,024x768	1,024x768	1,024x768
Native aspect ratio	4:3	4:3	4:3	4:3	4:3	4:3	4:3	4:3
Other aspect ratios	16:9	16:9	16:9	16:9	16:9	16:9, 5:4:3	16:9	16:9
Max diagonal at 213cm/7ft	57in	60in	78.5in	80in	60in	60in	59in	105in
Throw ratio	1.97:1 fixed	1.15:1 fixed	1.94 to 2.13:1	1.3 to 1.5:1	1.8 to 2.1:1	1.45 to 1.70:1	1.49 to 1.79:1	1.9 to 2.25:1
Projection distance	1.5m to 12.02m	1.8m to 12.2m	1.5m to 12m	0.8m to 7.8m	1.5m to 13.4m	1.1m to 11.1m	1.19m to 9.13m	1.6m to 12m
Mirrors/invert	Yes/yes	Yes/yes	Yes/yes	Yes/yes	Yes/yes	Yes/yes	Yes/yes	Yes/yes
HD ready	No	No	No	No	No	No	No	No
Special view modes	Bright, PC, video, theatre, sRGB, user	Dynamic, presentation, sRGB, cinema, blackboard	PC, movie, sRGB, game, custom	Normal, small, cinema, dynamic, board (black), board (green), whiteboard	Presentation, video, movie, graphic, sRGB, high-bright, wall colour	Standard, dynamic, blackboard, natural	Full, through, wide, blackboard	PC, movie, sRGB, user
INPUTS/OUTPUTS								
VGA/DVI	Yes/yes	Yes/yes	Yes/no	Yes/no	Yes/no	Yes/no	Yes/no	Yes/no
Max compressed resolution	1,280x1,024	1,280x1,024	1,600x1,200	1,600x1,200	1,600x1,200	1,400x900	1,600x1,200	1,152x864
Audio inputs	3.5mm	3.5mm	3.5mm	3.5mm	None	3.5mm, phono	3.5mm, phono	3.5mm
Composite/S-video/HDMI	Yes/yes/no	Yes/yes/no	Yes/yes/no	Yes/yes/no	Yes/yes/no	Yes/yes/no	Yes/yes/no	Yes/yes/no
Component video	Via VGA	Via VGA	Via VGA	No	Via VGA	No	Via VGA	No
PAL/SECAM/NTSC	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes
Audio output	3.5mm	No	3.5mm	3.5mm	No	3.5mm	3.5mm	3.5mm
Video output	D-sub	D-sub	D-sub	D-sub	No	D-sub	D-sub	No
Other inputs/outputs	LAN, 802.11b/g wireless, USB pointer control	USB pointer control	USB pointer control, second VGA input	USB pointer control, flash drive, 2nd VGA input	None	802.11b/g wireless	None	iPod dock
OTHER								
Noise in normal use	30dB	28dB	36dB(A)	41dB	40dB(A)	30dB	36dB	36 dB
Dimensions (HxWxD)	104x283x256mm	94x278x222mm	211x244x115mm	59x274x205mm	72x246x177mm	57x297x210mm	82x288x247mm	70x283x195
Weight	2.7kg	2.7kg	2.1kg	1.7kg	1.6kg	1.9kg	2.8kg	1.8kg
Internal speaker (power)	Yes (3W)	Yes (2W)	Yes (2W)	Yes (1W)	None	Yes (1W)	Yes (1W)	Yes (2W)
Accessories	Remote, cables (power, VGA, composite, USB, S-video, audio), VGA to component adaptor	Remote, cables (power, VGA, composite), carry case	Remote, cables (power, VGA), carry case	Remote, cables (power, VGA), carry case	Remote, cables (power, VGA), carry case	Remote, cables (power, VGA), carry case	Remote, cables (power, VGA), case, mouse remote control receiver	Remote, cables (power, VGA, composite, audio), carry case
Remote special features	Laser pointer, one programmable button	None	None	Two programmable buttons	Right- and left-click mouse buttons	Laser pointer	Laser pointer, mouse control, left and right click, page back	Laser pointer, iPod remote control, control function
LAMP								
Cost including VAT	£300	£202	£234	£300	£210	£300	£171	£264
Supplier	www.justlamps.net	www.zomp.net	www.dell.co.uk	www.justlamps.net	www.lambda-tek.com	www.justlamps.net	www.justlamps.net	www.viewsonic.co.uk
Lamp cost per hour of use	£0.08	£0.05	£0.08	£0.15	£0.11	£0.10	£0.06	£0.13
BUYING INFORMATION								
Price including VAT	£871	£692	£704	£821	£1,033	£805	£604	£799
Supplier	www.morecomputers.co.uk	www.dabs4work.com	Dell 08701 524699	www.pcbw.com	www.zomp.net	http://uk.insight.com	www.oyyy.co.uk	ViewSonar 01293 643900
Details	www.acer.co.uk	www.benq.co.uk	www.dell.co.uk	www.hitachidigitalmedia.com	www.nec.co.uk	www.panasonic.co.uk	www.toshiba.co.uk	www.viewsonic.co.uk
Warranty	Two years return to base (lamp 90 days)	Three years, first year onsite, two years swapout (lamp 90 days)	Two years swapout (lamp 90 days)	Three years swapout (lamp 90 days)	Three years onsite (lamp 90 days)	Three years swapout (lamp 90 days)	Three years swapout (lamp 90 days)	Three years collect and return (one year lamp)
Manufacturer's part code	EYJ2701.013	9JJ2777.B5E	1800MP	CPX5	50032049	PT-LB50NTEA	TLP-X2000	PJ258D

HOME CINEMA PROJECTORS

★ BEST BUY				
MANUFACTURER	HITACHI	INFOCUS	OPTOMA	TOSHIBA
Model	Illumina PJ-TX300	Play Big IN76	ThemeScene HD70	TDP-ET20
Rating	★★★★★	★★★	★★★	★★
SPECIFICATIONS				
Technology	0.7in 3-LCD	.65in DLP	0.65in DLP	0.55in DLP
Lamp	150W	200W	220W	230W
Lamp life in hours (economy)	2,000 hours	3,000 hours	3,000 hours	3,000 hours
Brightness (ANSI lumens)	1,200 ANSI lumens	1,000 ANSI lumens	1,000 ANSI lumens	1,100 ANSI lumens
Contrast ratio	10,000:1	3,000:1	4,000:1	2,000:1
PICTURE				
Native resolution	1,280x720	1,280x720	1,280x720	854x480
Native aspect ratio	16:9	16:9	16:9	16:9
Other aspect ratios	4:3	4:3	4:3	4:3
Max diagonal at 213cm/7ft	80in	60in	57in	114 at 1.6m
Throw ratio	1.27 to 2.06:1	1.53 to 1.94:1	1.58 to 1.9:1	0.4:1 fixed
Projection distance	0.8m to 13.8m	1.5 to 6.1m	1.5 to 11m	0.34m to 1.6m
Mirrors/invert	Yes/yes	Yes/yes	Yes/yes	Yes/yes
HD ready	Yes	Yes	Yes	No
Special view modes	Normal, cinema low, cinema high, sports, music	CRT, film, video, PC, bright room	Film, video, graphics, PC	Standard, dynamic, theatre 1, theatre 2
INPUTS/OUTPUTS				
VGA/DVI	Yes/no	No/M1-DA	Yes/no	Yes/no
Max compressed resolution	1,280x1,024	N/A	1,400x1,050	1,280x1,024
Audio inputs	No	None	No	Coaxial digital
Composite/S-video/HDMI	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes
Component video	Yes	Yes	Yes	Yes
PAL/SECAM/NTSC	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes	Yes/yes/yes
Audio output	No	No	No	Coaxial digital
Video output	No	No	No	No
Other inputs/outputs	None	None	None	None
OTHER				
Noise in normal use	28dB	32dB	28dB	34dB
Dimensions (HxWxD)	113x340x298	119x361x361mm	108x265x256mm	322x344x155mm
Weight	4.7kg	4.2kg	2.5kg	5.0kg
Internal speaker (power)	None	None	None	Yes (subwoofer 5W, centre 2W, rear 1W)
Accessories	Remote, cables (power, component)	Remote, cables (power)	Remote, cables (power, composite, S-video, component, VGA), SCART RGB adaptor	Remote, cable (power), SCART adaptor
Remote special features	One programmable button, black mode, iris	Flashlight, one programmable button	None	DVD controls
LAMP				
Cost including VAT	£166	£149	£137	£213
Supplier	www.zomp.net	www.morecomputers.co.uk	www.cvsmedia.co.uk	www.lambda-tek.com
Lamp cost per hour of use	£0.08	£0.05	£0.05	£0.07
BUYING INFORMATION				
Price including VAT	£814	£1,214	£680	£949
Supplier	www.pixmania.co.uk	www.pixmania.co.uk	www.cvsmedia.co.uk	www.comet.co.uk
Details	www.hitachidigitalmedia.com	www.infocus.com	www.optoma.co.uk	www.home-entertainment.toshiba.co.uk
Warranty	One year return to base (lamp 90 days)	Two years swapout (lamp 90 days)	Three years swapout (lamp 90 days)	Two years swapout (lamp 90 days)
Manufacturer's part code	HITPRX63	IN76	OPTPR022	TDPET20UK

Labs verdict Projectors

Whether you want a projector for viewing movies on a big screen at home or for making presentations at work, you'll find an ideal product in this test. If you want to show presentations, Dell's 1800MP is the one to buy. It's good value, has excellent image quality for presentations and will suffice for watching movies from time to time. It has very little rainbow effect, and is reasonably cheap to run. It wins our Best Buy award.

If you want to enjoy movies on a big screen at home, we recommend Hitachi's Illumina PJ-TX300. It produces excellent image quality, and its HD resolution will make the most of high-definition films if you buy a Blu-ray or HD DVD player in future. At just over £800 it's excellent value, too, so it also earns a Best Buy award. **ES**

OFFICE PROJECTORS

★ BEST BUY

COMPUTER SHOPPER

DELL

1800MP

★★★★★

HOME CINEMA PROJECTORS

★ BEST BUY

COMPUTER SHOPPER

HITACHI Illumina

PJ-TX300

★★★★★